Discussion Group T05: Overspeed Trip Systems

Leaders:

- Bruce Bayless (Valero)
- Kevin Yates (Dow)
- Scott Shane (Dow)
- Donald Kautz (Dow)
- Josh Autenrieth (Dow)

Suggested Topics:

- Electronic overspeed detection system (speed sensors and logic devices)
- Number, logic
- Speed sensing gear
- Sensor type
- Electro-hydraulic solenoid valves
- De-energize to shutdown (API default)
- Number, location, orientation (vertical or horizontal)
- Built in position sensor
- Detection system to alarm on failure of the coil; change online
- Capable of on-line testing without defeating trip protection
- Emergency trip valve(s)/combined trip and throttle valve(s)
- "Mechanical latch type" and "Oil operated/actuated type"
- Periodic online exercising - partial stroke test (frequency)
- Full instrument loop "proof" test (frequency)
- Valve overhaul (repair shop, overhaul frequency, etc.)
- Systems with duplicate trip valves arranged in parallel
- OEM upgrades (i.e. metallurgy, etc.)
- Non-return valve on extraction turbines
- Overspeed initiates a signal to close non-return valve
- Types (spring-loaded hydraulic actuated cylinder; pneumatic actuated cylinder)
- Valve overhaul (repair shop, overhaul frequency, etc.)
- Testing
- Mechanical overspeed system
- Test frequency

- Exhaust vacuum breaker
- "Back up" coupling feature for steam turbine applications to stay coupled to load/inertia upon main coupling failure
- Other API 612, 611, 670 and ASME PTC 20.2 items